

## **CLAIMS**

What is claimed is:

- 5 1. A method for authentication in a computer system, the method comprising the steps of:  
bringing the computer system out of reset; checking if a memory section is written and if  
so, allocating the memory section to memory function; verifying device identification if  
the memory section is not written, and if no match is found, halt the system; repeat read  
to set an incremental input key, and if the key cannot be altered, halt the system; verify  
10 authentication return keys, and if the verify fails, halt the system; and continue to bring  
the computer system out of reset.
2. The method of claim 1 further comprising the step of reading of incremental  
authentication input keys and authentication return keys.
3. The method of claim 1 further comprising the step of using the first eight bytes of each  
15 memory section to provide device identification.
4. The method of claim 3 further comprising the step of using part of the identification as a  
fixed value as long as a section is serving the authentication function.
5. The method of claim 1 further comprising the step of reading a first field of each section  
to ensure that the section is serving the authentication function.
- 20 6. The method of claim 1 further comprising the step of reading a second field as an  
incremental authentication input key.
7. The method of claim 6 further comprising the step of incrementing the contents of the  
second field every time it is read.
8. The method of claim 7 further comprising the step enabling the CPU to set the value of  
25 the second field by reading it a specified number of times.
9. The method of claim 8 further comprising the step using the value of the second field to  
calculate values of the authentication keys.

10. The method of claim 1 further comprising the step of obsolescing the authentication keys when an attempt to defeat the system is made by placing a copy of known authentication keys in memory.
11. In a computer system, a random access memory device comprising: a plurality of memory cells arranged in sections, including a first section containing a manufacturer identification fixed when the computer system is in an authentication mode; a second read incremental section incrementing at each read of a central processor unit of the computer system; and an authentication return keys third section including a secret authentication key.

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